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| EXAMINER |
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LAVARIAS, ARNEL C

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| ART UNIT | PAPER NUMBER |
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2872

DATE MAILED: 01/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/764,315

Applicant(s)

DEVERIN ET AL.

Examiner

Arnel C. Lavarias

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 November 2005.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 22-33 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 22-33 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 23 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. The cancellation of Claims 1-21 in the submission dated 11/3/05 is acknowledged and accepted. In view of these amendments, the objections to Claims 4, 5, 16, 17, and 18 in the 'Specification' section of the Office Action dated 8/2/05 are respectfully withdrawn. In addition, the objections to Claims 13-15 in the 'Claim Objections' section of the Office Action dated 8/2/05 are respectfully withdrawn.
2. The addition of Claims 22-33 in the submission dated 11/3/05 is acknowledged and accepted.
3. It is noted that the Applicants did not make any amendments to the abstract of the specification to correct deficiencies noted in the 'Specification' section of the Office Action dated 8/2/05.

Drawings

4. In view of the amendments made to the claims above, the originally filed drawings received on 1/23/04 are now found acceptable.

Response to Arguments

5. The Applicants' arguments with regard to Claims 1-21 under various teachings of Koetke, Conia et al., Nonoda et al., Littmann, and Gibbons et al. are acknowledged.

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However, these arguments are moot in view of the cancellation of Claims 1-21 and the withdrawal of the rejections to these claims.

6. Claims 22-33 are rejected as follows.

Specification

7. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. *It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.*

8. The abstract of the disclosure is objected to because of the following informalities:

Abstract, line 1- 'The invention concerns a' should read 'A'.

Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 112

9. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

10. Claims 25, 28, and 30 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter

which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 25 recites the limitation that ‘the pair of lateral deflection elements and the deflection prism are not parts of a composite deflection element’. The specification of the disclosure fails to specifically disclose this limitation. In particular, elements 12a/17a/18a, 12b/17b/18b, and 5 of Figures 2a, 2c, and 3 all appear to be part of the composite deflection element.

Claim 28 recites the limitation that ‘the pair of lateral deflection elements and the deflection prism are replaceable to permit interchange with like elements of chosen power’. The specification fails to specifically disclose that any one or all three of these elements are replaceable. Further, the specification fails to disclose that such elements are replaceable to provide a particular or chosen focal power. Figure 1b merely discloses that the deflection prism 5 may include refractive power; and Paragraph 0020 merely discloses that the deflection prisms 18a, 18b may have refractive power. No mention of interchanging such elements was found.

Claim 30 recites the limitation that ‘each of the pair of lateral deflection elements is a concave mirror’. The specification fails to specifically disclose that the deflection elements are concave mirrors. Paragraph 0019 only specifies that such deflection elements may be mirrors, and Figure 2c shows these mirrors to be planar mirrors.

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

12. Claims 22-23, 25-26, 28-29, 31-33, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Greenberg (U.S. Patent No. 5548441).

Greenberg discloses a stereomicroscope (See for example Figures 2-3, 5-7) comprising a main objective (See for example 12 in Figure 2; 101 in Figure 6); an illumination source providing an illumination beam directed along an illumination axis (See for example one of 26 or 29 in Figure 2; one of 58, 59, 61 in Figure 3; one of 108, 126 in Figure 6); a pair of lateral illumination sources each providing a lateral illumination beam directed along a respective lateral illumination axis (See for example the other two of 58, 59, 61 in Figure 3; See also Figures 2c-2e; 3a-3c; 7); a deflection prism arranged in the illumination axis for deflecting the illumination beam toward the main objective (See one of 23, 24 associated with one of 26 or 29 in Figure 2; one of 48, 49, 50 associated with one of 58, 59, 61 in Figure 3; one of 115, 130 associated with one of 108, 126 in Figure 6; col. 10, lines 44-55); and a pair of lateral deflection elements on opposite sides of the illumination axis, one lateral deflection element in each of the lateral illumination axes, the pair of lateral deflection elements deflecting the lateral illumination beams toward the main objective (See for example the other two of 48, 49, 50 associated with the other two of 58, 59, 61 in Figure 3; See also Figures 2c-2e; 3a-3c; 7); wherein

the lateral illumination axes are non-parallel to the illumination axis (See for example Figures 2c-2e, 3, 3a-3c, 7c-e). Greenberg additionally discloses the pair of lateral deflection elements being arranged directly adjacent to opposite sides of the deflection prism (See for example Figures 2c-e, 3a-c, 7c-e); the pair of lateral deflection elements and the deflection prism being or not being parts of a composite deflection element (For example, as shown in Figure 3, elements 48, 49, 50 are shown as separate deflection elements. However, taken as a group, the three elements may be considered a single composite deflection element.); the pair of lateral deflection elements and the deflection prism being replaceable to permit interchange with like elements of chosen focal power (See for example Figure 7e, wherein one leg would be chosen along an illumination axis, and any two of the remaining five legs would be inserted and removed to provide the pair of lateral illumination beams, wherein the chosen focal power is zero); the pair of lateral deflection elements is a mirror or a prism (See col. 10, lines 44-55); and at least one or both of the lateral illumination axes extend in a direction approximately perpendicular to a direction of the illumination axis (See for example Figures 2d, 7d).

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Greenberg in view of Nonoda et al. (U.S. Patent No. 6075643), of record.

Greenberg discloses the invention as set forth above in Claim 22, except for the light frequency of the lateral illumination beams being in the ultraviolet range. However, Nonoda et al. teaches a reflection fluorescence microscope (See for example Figure 13), wherein multiple sources (See 3, 6, 9, 12 in Figure 13) are used to illuminate the sample (See 1 in Figure 13). In particular, Nonoda et al. teaches that mercury light sources may be used. It is noted that the spectra for light emitted by mercury lamps (See Figure 1 as shown in the Office Action dated 8/2/05) inherently includes wavelengths in the ultraviolet range. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have the light frequency of the lateral illumination beams be in the ultraviolet range, as taught by Nonoda et al., in the stereomicroscope of Greenberg, for the purpose of providing more varied illumination and excitation conditions of the sample in the microscope system.

15. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Greenberg in view of Littmann (U.S. Patent No. 3186300), of record.

Greenberg discloses the invention as set forth above in Claim 22, except for the at least one of the pair of lateral deflection elements and the deflection prism having non-zero focal power. However, Littmann teaches a microscope (See for example Figure 4) comprising two prisms (See 28, 28' in Figure 4), whose exit surfaces are spherical, that reflect incident light from the illumination source (See col. 3, lines 19-23). It is noted that since exit surfaces are spherical (curved), these surfaces will inherently exhibit non-

zero focal power. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have the at least one of the pair of lateral deflection elements and the deflection prism have non-zero focal power, as taught by Littmann, in the stereomicroscope of Greenberg, for the purpose of providing a sharply delimited illumination field.

16. Claim 30, as best understood, is rejected under 35 U.S.C. 103(a) as being unpatentable over Greenberg in view of Gibbons et al. (U.S. Patent No. 4311358), of record.

Greenberg discloses the invention as set forth above in Claims 22, 29, except for each of the pair of lateral deflection elements being a concave mirror. However, Gibbons et al. teaches an illuminating device for fluorescence microscopes comprising a concave mirror (See 19 in the Figure) that deflects an incident light from the illumination source (See col. 2, lines 46-49). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have each of the pair of lateral deflection elements be a concave mirror, as taught by Gibbons et al., in the stereomicroscope of Greenberg, for the purpose of providing additional shaping (e.g. additional collimation, focusing, or de-focusing), in addition to the conventional deflecting function, of the incident beam in the microscope system.

Conclusion

17. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arnel C. Lavarias whose telephone number is 571-272-2315. The examiner can normally be reached on M-F 9:30 AM - 6 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on 571-272-2312. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Arnel C. Lavarias
Patent Examiner
Group Art Unit 2872
1/11/06